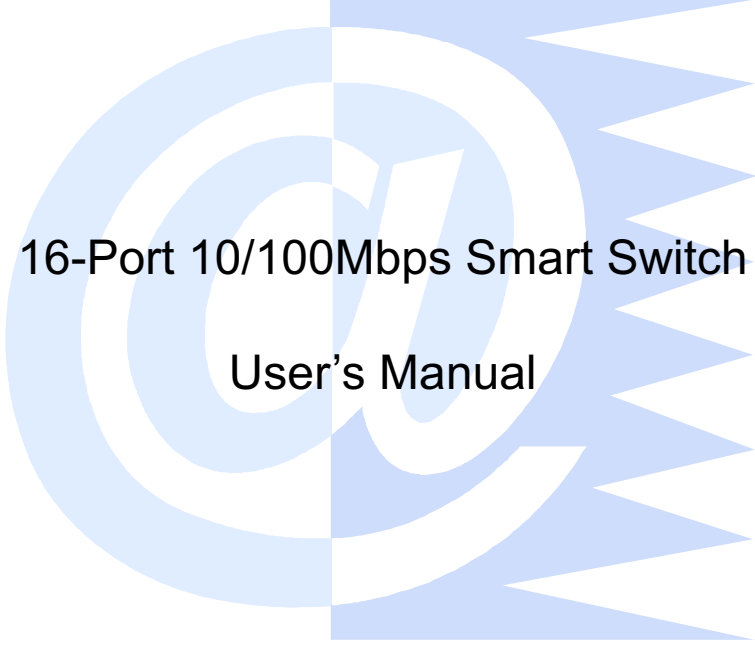


16-Port 10/100Mbps Smart Switch

User's Manual

Introduction

The 16-Port 10/100Mbps Smart Switch is the latest design in its Smart Switches series for easy installation and high performance in an environment where traffic on the network and the numbers of users increasing continuously. What makes the 16-Port 10/100Mbps Smart Switch outstanding from the crowd is its built-in VLAN and Trunk configuration.

With VLAN, stations in the same LAN segment can be grouped into different network segment. The goal of VLANs is to allow for complete mobility of workstation placement, yet keeping broadcast traffic to a minimum. When enabling VLAN function, the workstation only can communicate with other workstations which are in the same VLAN group.

With Trunk, the backbone bandwidth can be increased to advance the network performance by easing and smoothing traffic load at peak hours. Small businesses and corporate branch offices can take full advantage of 100Mbps Fast Ethernet performance and preserve existing desktop investment with no changes required to PCs, NICs, cabling, drivers, or PC configurations.

Package Contents

1.One 16-Port 10/100Mbps Smart Switch
2.One Power Cord
3.One User's Manual
4.Two Mounting Brackets
5.One Pack of Screws

Note: If any item is damaged or missing, please contact your supplier.

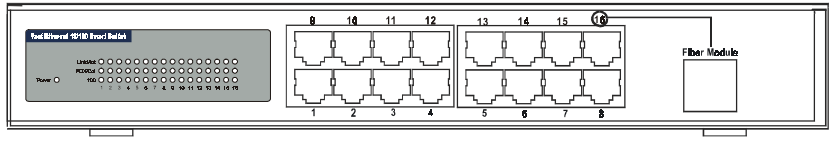
Hardware

Following describes the front panel, LED indicators, and rear panel of the Switch.

Front Panel

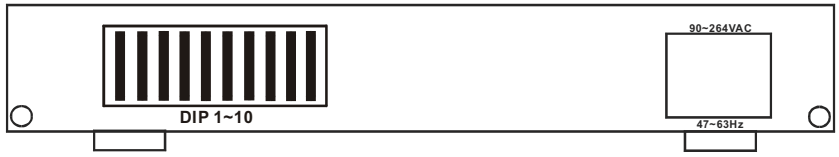
The front Panel consist of 16 10/100M RJ-45 ports,16 port LED indicators, and one fiber port.(only 16 Port 10/100M Ethernet Rack-Mount Smart Switch)

16 Port 10/100Mbps Smart Switch



Rear Panel

16 Port 10/100Mbps Smart Switch



LED Indicators

The LED indicators of the Switch include Power, Link/Act (Link Activity), FDX/COL. (Full-Duplex/Collision) and 100Mbps link speed status.

1. Power

This indicator operates when the Switch is turned on. If this indictor is not lit, check the DC power connector to ensure proper insertion of the power cord and that the power switch is turned ON.

2. Link/Act

These LED indicators are lighted up when there is a secure connection (or link) to a device at any of the 16 ports. The LED indicators blink whenever there is reception or transmission (i.e. Activity/ACT.) of data occurring at any of the 16 ports.

3. FDX/Col

This LED indicator is lighted up when a respective port is in full-duplex (FDX) mode. Otherwise, it is OFF for half-duplex (HDX) operations. It blinks when collisions are occurring on the respective port.

4. 100

This LED lights when the transmission rate is 100Mbps. It is OFF when the transmission rate is 10Mbps or no linking.

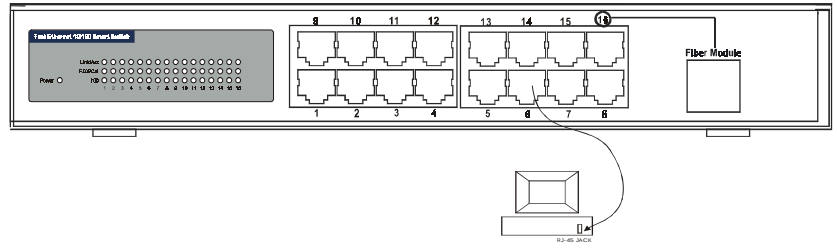
Network Connections

Following describes how to connect this Switch to your Fast Ethernet network.

Switch to PC

A PC can be connected to the Switch via a twisted-pair Category 3, 4,5 for 10Mbps and category 5 for 100Mbps.(UTP/STP straight cable or cross-over cable) The PC (equipped with a RJ-45 10/100Mbps jack) should be connected to any of sixteen ports.

16 Port 10/100Mbps Smart Switch



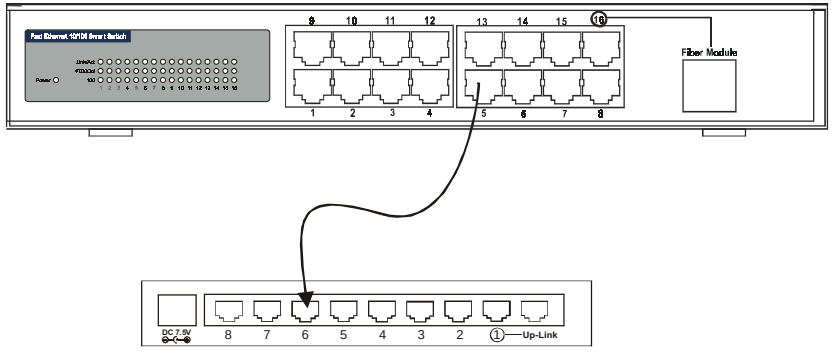
The LED indicators for PC connection are dependant on the LAN card capabilities. If LED indicators are not illuminated after making a proper connection, check the PC LAN card, the cable, Switch conditions and connections.

The following are LED indicator possibilities for a PC to Switch connection:

1. The Link/ACT. LED indicator illuminates upon hookup.
2. The FDX/COL. LED indicator depends upon LAN card capabilities.
3. The 100 LED indicator comes on for a 100Mbps connection and stays off for 10Mbps connection.

Switch to Hub

A 10 BASE-T Hub can be connected to the switch via a twisted-pair Category 3,4,5 UTP/STP straight cable or crossover cable. And the 100BASE-TX Hub should be connected via Category 5 UTP/STP straight cable or crossover cable.



When the fiber module connects to the fiber board, but it doesn't connect to the fiber cable.

Led Status

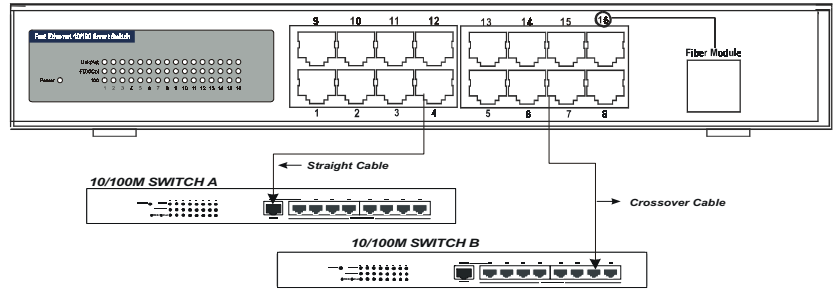
Led	Color	Status
Link	Green	Off
Full	Green	On
100	Green	On

After the fiber module connects to the fiber board, you have to restart the power again.

Switch to Switch (Other Devices)

The Switch can be connected to another switch or other devices (routers, bridges, etc.)via a twisted-pair Category 5 UTP/STP straight or crossover cable for 100Mbps connection.

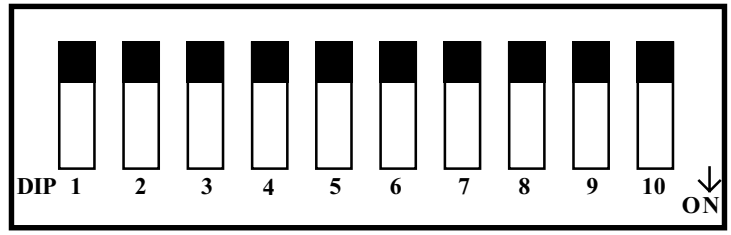
16 Port 10/100Mbps Smart Switch

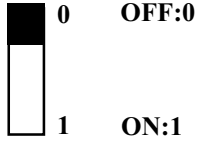


Technical Specifications

	16 Port 10/100Mbps Switch
Standards :	IEEE802.3 10BASE-T Ethernet IEEE802.3u 100BASE-TX Fast Ethernet IEEE802.3x Flow control for Full-Duplex
Networking Interface :	16 10/100Mbps RJ-45 ports
Uplink Interface :	Each port support auto-crossover
Connector :	RJ-45 port
Cable : 10BASE-T : 100BASE-TX: 100BASE-FX :	 UTP Cat.3,4,5 or up UTP Cat.5 or up multi-mode 50/125,62.5/125 μm single-mode 8/125,9/125 μm
Transmission Mode :	10/100Mbps, Full/Half-Duplex (Auto-sensing)
Transmission Speed:	10/100Mbps for TP port
Transmission Method :	Store and Forward
MAC address :	8K
Buffer Memory :	1.5M
Backplane :	4.2Gbps
VLAN :	Port-Base VLAN
Trunking :	Port-Base Trunk
Packet Forwarding/ Filtering Rate :	10Mbps: 14880pps 100Mbps:148800pps
Flow Control :	IEEE 802.3x Flow control for Full-Duplex Back pressure for Flow control in Half-Duplex
Diagnostic LED :	Power, Link/Act, 100, FDX/Col
Power Requirement :	Voltage: AC90-264V; Frequency:47-63Hz; Consumption:maximum 12W
Temperature : Operating : Storage :	 0 ºC ~ 45 ºC 0 ºC ~ 60 ºC
Humidity : Operating : Storage :	 10% ~ 90% 5% ~ 95%
Dimensions :	44(H)*440(W)*148.5(D)mm
Certification :	FCC Part 15 Class A & CE Mark

Smart Function





DIP 1: **Enable Port Based VLAN configuration function:**

1: Enable the VLAN function on each port.

0: Disable the VLAN function on each 16 ports. (default)

DIP 2: **VLAN topology type selection:**

1:Select 15 VALNs (port#1~11,13~16) with 1 overlapping port (port#12) topology.

Ext. Port#1,12 as one group, Port#2,12 as one group.....

0:Select 14 VLANs(port#1~3,5~11,13~16)with 2 overlapping ports (port#4,12)topology.(default)

Ext. Port#1,4,12 as one group, Port#2,4,12 as one group.....

DIP 3: **Enable Port Trunk 0:**

1: Enable port trunk 0 which consists of ports 5,6,13,14

0: Disable port trunk 0

DIP 4: **Enable Port Trunk 1:**

1: Enable port trunk 1 which consists of ports 7,8,15,16

0: Disable port trunk 1

DIP 5: **Enable Port Trunk 2:**

1: Enable port trunk 2 which consists of ports 1,2,9,10

0: Disable port trunk 2

DIP 6: **Enable Port Trunk 3:**

1: Enable port trunk 3 which consists of ports 3,4,12,13

0: Disable port trunk 3

DIP 7/8: **Enable Port based priority QoS function:**

00: Disable port based priority. (default)

01: Set port 5,13 as high priority ports.

10: Set port 5,6,13,14 as high priority ports.

11: Set port 5~8,13~16 as high priority ports.

DIP 9: **Enable 802.1p VLAN Tag priority based QoS function:**

1: Enabled

0: Disabled (default)

DIP 10: **Enable TCP/IP TOS/DS (DiffServ) based QoS function:**

1: Enabled

High Priority: if pattern bits TOS/DS[0:5] =(EF) "101110";(AF)

"001010", "010010","011010", "100010";(Network Control)

"11x000";Low Priority: if TOS/DS = other codepoint values.

0: Disabled (default)(DS = Differentiated Service)

Note: 1. If any physical port of a trunk group has a link down, a fault condition has happened on this trunk group.

2. After you change the status of any DIP, you have to restart the switch again.